

**DETAILED ACTION**

1. Applicant's Appeal Brief Filed on 07/10/2008 has been entered into record. Applicant's argument on claim rejections under 35 U.S.C. 112, first paragraph is reviewed and accepted. Claims 2-18, 22-24, 30, 32-33 and 35-40 are currently pending.
2. Applicant's amendment received on 10/24/2007 was entered. Claims 5-10, 13-18, 22-24, 30, 32,-33 and 35-40 were amended. Claims 19-21, 25-29 and 34 were cancelled.
3. Applicant's submission filed on 05/08/2007 was entered. Claims 2-10, 12-20, 23-25, 30 and 32-40 were amended.
4. Amendment received on 12/04/2006 was entered into record. No claim was amended.
5. Applicant's submission filed on 03/15/2006 was entered. Claims 2, 4-5, 11-12, 14-15, 30 and 40 were amended. Claims 1, 31 and 41-44 were cancelled.
6. Amendment received on 06/29/2005 was entered. Claims 1, 5, 14-15, 30, 40-41 and 43-44 were amended. Claims 1-44 are still pending.

***Priority***

7. This application has no priority claim made. The filing date is 12/12/2001.

***Examiner's Amendment***

8. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.
9. Authorization for this examiner's amendment was given in a telephone interview with Dean Munyon (Reg. No. 42,914) on 09/08/2008.

10. The application has been amended against applicant submitted claim set dated 10/24/2007 as follows (only examiner amended claims are shown):

**IN THE CLAIMS**

5. A method comprising:

creating a plurality of component fingerprints, wherein the plurality of component fingerprints includes a fingerprint for a first component, wherein creating the fingerprint for the first component comprises identifying a plurality of attributes of the first component and selecting one or more, ~~but not all~~, of the plurality of attributes as the fingerprint for the first component;

automatically discovering the existence of a plurality of components in an information technology (IT) system using the plurality of component fingerprints, wherein the discovered components include the first component, wherein automatically discovering the existence of the first component comprises:

receiving a plurality of event messages indicating a plurality of real-time events that occur in the IT system, wherein each event message matches a respective attribute of the fingerprint for the first component; and

determining that event messages matching every attribute of the fingerprint for the first component have been received;

wherein the method further comprises:

automatically determining at least one dependency between two or more of the discovered components; and

tracking changes to at least one of the discovered components and the at least one dependency between two or more of the discovered components.

13. A computer-readable storage medium ~~storing~~ containing program instructions that are computer executable to implement a method comprising:

identifying a plurality of attributes of a first component and listing one or more, ~~but not all~~, of the plurality of attributes in a fingerprint for the first component;

an observer module detecting a plurality of real-time events in an information technology (IT) system, wherein each event matches a respective attribute listed in the fingerprint for the first component;

the observer module sending a respective event message to an analysis module in response to each of the plurality of real-time events;

the analysis module accumulating the event messages and analyzing the event messages in order to determine that events matching every attribute listed in the fingerprint for the first component have occurred in the IT system; and

the analysis module indicating that the first component exists in the IT system in response to said determining that events matching every attribute listed in the fingerprint for the first component have occurred in the IT system.

14. A system comprising:

means for creating a plurality of component fingerprints, wherein the plurality of component fingerprints includes a fingerprint for a first component, wherein creating the fingerprint for the first component comprises identifying a plurality of attributes of the first

component and selecting one or more, ~~but not all~~, of the plurality of attributes as the fingerprint for the first component;

means for automatically discovering the existence of a plurality of components in an information technology (IT) system using the plurality of component fingerprints, wherein the discovered components include the first component, wherein automatically discovering the existence of the first component comprises:

receiving a plurality of event messages indicating a plurality of real-time events that occur in the IT system, wherein each event message matches a respective attribute of the fingerprint for the first component; and

determining that event messages matching every attribute of the fingerprint for the first component have been received;

means for automatically determining at least one dependency between two or more of the discovered components; and

means for tracking changes to at least one of the discovered components and the at least one dependency between two or more of the discovered components.

15. An apparatus comprising: a memory storing program instructions;

a processor in communication with the memory; in which the processor is directed by the program instructions to:

create a plurality of component fingerprints, wherein the plurality of component fingerprints includes a fingerprint for a first component, wherein creating the fingerprint for the first component comprises identifying a plurality of attributes of the first component and

selecting one or more, ~~but not all~~, of the plurality of attributes as the fingerprint for the first component;

automatically discover the existence of a plurality of components in an information technology (IT) system using the plurality of component fingerprints, wherein the discovered components include the first component, wherein automatically discovering the existence of the first component comprises:

receiving a plurality of event messages indicating a plurality of real-time events that occur in the IT system, wherein each event message matches a respective attribute of the fingerprint for the first component; and

determining that event messages matching every attribute of the fingerprint for the first component have been received;

automatically determine at least one dependency between two or more of the discovered components; and

track changes to at least one of the discovered components and the at least one dependency between two or more of the discovered components.

16. A method comprising:

creating a fingerprint for a first component, wherein creating the fingerprint for the first component comprises identifying a plurality of attributes of the first component and selecting one or more, ~~but not all~~, of the plurality of attributes as the fingerprint for the first component;

creating a subfingerprint for a refinement of the first component, wherein the subfingerprint for the refinement of the first component includes one or more attributes of the refinement of the first component;

automatically discovering the first component in an information technology (IT) system, wherein automatically discovering the first component comprises:

receiving a plurality of event messages indicating a plurality of real-time events that occur in the IT system, wherein each event message matches a respective attribute of the fingerprint for the first component; and

determining that event messages matching every attribute of the fingerprint for the first component have been received;

wherein the method further comprises:

in response to discovering the first component, performing one or more commands to obtain information regarding the first component; and

automatically discovering the refinement of the first component in the IT system by matching the information regarding the first component to the one or more attributes of the refinement of the first component included in the subfingerprint for the refinement of the first component.

23. A computer-readable storage medium ~~storing~~ containing instructions that direct a microprocessor to:

create a fingerprint for a first component, wherein creating the fingerprint for the first component comprises identifying a plurality of attributes of the first component and selecting one or more, ~~but not all,~~ of the plurality of attributes as the fingerprint for the first component;

create a subfingerprint for a refinement of the first component, wherein the subfingerprint for the refinement of the first component includes one or more attributes of the refinement of the first component;

automatically discover the first component in an information technology (IT) system, wherein automatically discovering the first component comprises:

receiving a plurality of event messages indicating a plurality of real-time events that occur in the IT system, wherein each event message matches a respective attribute of the fingerprint for the first component; and

determining that event messages matching every attribute of the fingerprint for the first component have been received;

in response to discovering the first component, perform one or more commands to obtain information regarding the first component; and

automatically discover the refinement of the first component in the IT system by matching the information regarding the first component to the one or more attributes of the refinement of the first component included in the subfingerprint for the refinement of the first component.

24. An apparatus comprising: a memory storing program instructions;  
a processor in communication with the memory; in which the processor is directed by the program instructions to:

create a fingerprint for a first component, wherein creating the fingerprint for the first component comprises identifying a plurality of attributes of the first component and selecting one or more, ~~but not all~~, of the plurality of attributes as the fingerprint for the first component;

create a subfingerprint for a refinement of the first component, wherein the subfingerprint for the refinement of the first component includes one or more attributes of the refinement of the first component;

automatically discover the first component in an information technology (IT) system, wherein automatically discovering the first component comprises:

receiving a plurality of event messages indicating a plurality of real-time events that occur in the IT system, wherein each event message matches a respective attribute of the fingerprint for the first component; and

determining that event messages matching every attribute of the fingerprint for the first component have been received;

in response to discovering the first component, perform one or more commands to obtain information regarding the first component; and

automatically discover the refinement of the first component in the IT system by matching the information regarding the first component to the one or more attributes of the refinement of the first component included in the subfingerprint for the refinement of the first component.

### *Reasons for Allowance*

11. Claims 2-18, 22-24, 30, 32-33 and 35-40 are allowed as amended above.

The following is an examiner's statement of reasons for allowance:

The closest prior arts of record issued to Kar et al., (An Architecture for Managing Application Services over Global Networks), Keller et al. (Dynamic Dependencies in Application Service Management) and Kathrow, et al. (US 6393438 B1) together fail to teach or suggest "a method comprising: creating a plurality of component fingerprints, wherein the plurality of component fingerprints includes a fingerprint for a first component, wherein creating the fingerprint for the first component comprises identifying a plurality of attributes of the first

component and selecting one or more, but not all, of the plurality of attributes as the fingerprint for the first component; automatically discovering the existence of a plurality of components in an information technology (IT) system using the plurality of component fingerprints, wherein the discovered components include the first component, wherein automatically discovering the existence of the first component comprises: receiving a plurality of event messages indicating a plurality of real-time events that occur in the IT system, wherein each event message matches a respective attribute of the fingerprint for the first component; and determining that event messages matching every attribute of the fingerprint for the first component have been received; wherein the method further comprises: automatically determining at least one dependency between two or more of the discovered components; and tracking changes to at least one of the discovered components and the at least one dependency between two or more of the discovered components.” in combination with all the elements of each independent claim as argued by Applicant [See section 2 of Argument as per appellant’s Appeal Brief Filed on 07/10/2008]. Applicant argues that the prior art does not disclose or suggest the combination of limitations “creating the fingerprint for the first component comprises identifying a plurality of attributes of the first component and selecting one or more of the plurality of attributes as the fingerprint for the first component”, “wherein each event message matches a respective attribute of the fingerprint for the first component”, “determining that event messages matching every attribute of the fingerprint for the first component have been received” and “tracking changes to at least one of the discovered components and the at least one dependency between two or more of the discovered components”. This argument is considered persuasive as per section 2 of Argument on page 19 through page 24 of appellant’s Appeal Brief Filed on 07/10/2008.

The dependent claims further limit the independent claims and are considered allowable on the same basis as the independent claims as well as for the further limitations set forth. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peling A. Shaw whose telephone number is (571) 272-7968. The examiner can normally be reached on M-F 8:00 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William C. Vaughn can be reached on (571) 272-3922. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/P. A. S./  
Examiner, Art Unit 2144  
/William C. Vaughn, Jr./  
Supervisory Patent Examiner, Art Unit 2144